

Christopher Lopez

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Experience

Vance Wealth – *Investment Associate*

March 2025 – November 2025

Quantitative Research & Strategy Development

- Designed a proprietary direct indexing exclusion model in Python using debt metrics to systematically identify optimal exclusion rates for highly leveraged companies, achieving 72 bps average annualized outperformance over nine of ten years.
- Produced statistical analysis proving that leveraged firms outperform during rising rate environments, leading leadership to implement an expanded screening model for client portfolios.

Process Automation & Portfolio Management

- Developed and implemented a systematic pipeline in Python for 401k mutual fund management, which automatically collected and evaluated fund data from Morningstar.
- Reduced the necessary mutual fund research and due diligence time from multiple days to under five minutes by incorporating adjustable, weighted performance metrics.

Trading Operations & Execution

- Managed and executed all trading operations for a book of client assets valued at approximately \$700 million, including performing daily pre- and post-trade execution checks to minimize trading errors, wash sale violations and ensure compliance.
- Executed complex rebalancing activities, invested excess cash flows, and performed ad hoc trade executions while analyzing the investment allocation of intricate client scenarios.

Portfolio Optimization & Due Diligence

- Delivered customized equity research, fundamental valuation analysis, and alternative investment due diligence (private credit, real estate, venture capital) to support high-conviction allocation decisions and broaden portfolio offerings.
- Enhanced portfolio efficiency through tax loss harvesting research, identifying viable backup instruments to generate tax alpha.

Education

California State University, Northridge – *B.A. Economics*

2020-2024

- Minor: Finance
- Certificate of Excellence
- GPA: 3.7
- V.P. Python Coding in Economics Club

Projects & Skills

Economic Indicators' Impact on Automotive Sales

- Conducted a comprehensive **ordinary least squares regression** analysis in **Python** to investigate the impact of economic indicators (inflation, unemployment, and federal funds rate) on total automotive sales. The process involved web scraping with **Selenium** and **Beautiful Soup** for data collection, followed by data transformation and cleaning using **Pandas** and **NumPy**. Employed the **Statsmodels** library to identify significant correlations and assess variable significance. Addressed autocorrelation using the ARIMA model, optimized through hyperparameter tuning with Sci-kit learn. Visualized results and provided insights for forecasting and strategic planning.

Machine Learning to Predict Customer Retention

- Developed a machine learning model in Python to predict customer churn using **logistic regression**. Preprocessed data with Pandas and NumPy, including handling missing values, normalizing features, and encoding categorical variables. Trained and tested the model using **Sci-kit learn**, evaluating performance with metrics like F1-score and the confusion matrix. Visualized results using **Seaborn** and **Matplotlib** to provide insights for predicting churn and improving customer retention.